

Are you being served?

Citation for published version (APA):

Odekerken-Schröder, G. J. (2011). *Are you being served?* (OBS 7425 ed.) Maastricht University.
<https://doi.org/10.26481/spe.20110325go>

Document status and date:

Published: 25/03/2011

DOI:

[10.26481/spe.20110325go](https://doi.org/10.26481/spe.20110325go)

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
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School of Business and Economics

Are you being served?



Are you being served?

Colofon

Ontwerp en print: Océ Business Services, Maastricht

ISBN: 978-90-5681-359-8

NUR: 780

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Are you being served?

Oratie

In verkorte en vrije vorm uitgesproken ter gelegenheid van de aanvaarding van het ambt van bijzonder hoogleraar Customer-Centric Service Science aan de School of Business and Economics van de Universiteit Maastricht

Op vrijdag 25 maart 2011

door Prof. Dr. Gaby Odekerken-Schröder

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Welcome

Mijnheer de Rector Magnificus, dames en heren, geachte collega's, lieve familie en vrienden, liefste Armand en Sterre,

Het is een grote eer om hier vandaag mijn passie over het vakgebied Service Science met u te mogen delen. Ik zal proberen een klein tipje van de sluier op te lichten en u mee te nemen in mijn ervaringen, ideeën en ambities op het vlak van onderzoek, onderwijs en kennisvalorisatie. Aangezien veel van mijn gasten niet Nederlands zijn, vervolg ik mijn rede in het Engels.

Dear Ladies and Gentlemen,

It is a great privilege to share my passion about the Service Science domain with all of you today. I will try to explain my experiences, ideas and ambitions related to research, education and valorization in this domain.

Let me start by recalling some of the services that you yourself experienced or delivered today. I bet that every one of you experienced a large number of varying services before you arrived here. The children in my audience, went to school this morning and enjoyed (or did not enjoy) educational services, some of my family members received medical services; we all benefited from utility services, some of you created financial or consulting services, or received mobile phone services, used transportation services or enjoyed hospitality services. But what about the wake up service of our alarm clock? Or the entertainment service of our iPod? Or are they mere products? It is my pleasure to share this fascinating discussion with you.

Looking at the surface of all these different services, it might be hard to see commonalities. Nevertheless, we all express value judgments and emotions like dull, boring, frustrating, annoying, exciting, professional, surprising, high quality, modern, rewarding or flawless. In the recent analysis that our Service Science Factory (SSF) did on service complaints, it became apparent that we experience disappointments in basically all available service sectors. Another commonality is that innovations in services are rapidly evolving. The low cost airline carriers, online auctions, internet banking, Wikipedia, and thrilling theme park experiences, did simply not exist when most of us were born. Besides, it looks like the

customer gets a more and more dominant role in co-creating services and the corresponding service innovations. It is no longer about the output a firm produces, but about the extent to which a firm can better serve its customers. The main question a company should ask its customers is therefore: Are you being served?

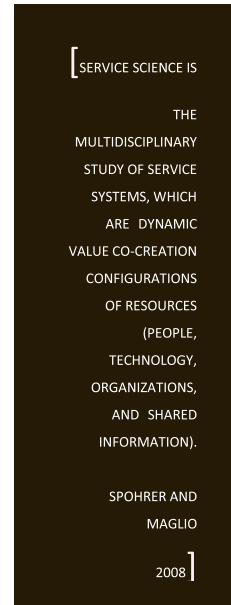
IBM, the multinational technology and consulting firm headquartered in New York, coined the term Service Science in 2004, introducing a new research era. They argue that the rapid growth of the service sector is unique in human history. Even companies that used to manufacture products are witnessing increased revenues derived from services. The necessity for service innovation to meet increasing quality standards has never been larger. The challenge to systematic service innovation that I am sharing with you today is the interdisciplinary nature of services, integrating marketing, technology, and social aspects. And I ask myself: would it help to learn from design thinking in realizing these interdisciplinary service innovations?

In my private and professional life I am intrigued by service encounters and their success or failure. Why am I frustrated at the end of a check-up by my surgeon, while we were overwhelmed by the authentic love and care of the nurses at the pediatric ward of the same hospital? In many services, uncritical attention to productivity and efficiency may result in disappointing customer experiences, ultimately affecting customer loyalty. Therefore, understanding the customer is key, because customers and their decisions are the source of all revenues (Rust 2008).

For that reason, I happily take the opportunity to make clear what my vision is on the large domain of customer-centric Service Science. I will also touch upon the implications for my research, education and valorization endeavors.

1. What does service science mean?

The term Service Science is a tongue twister for many of us, and Customer-Centric Service Science, the title of my chair even more so. But what is the origin of Service Science? We all know IBM as an established company focusing on innovation and technology, well-known for its emphasis on computer science. Only about seven years ago, in 2004, IBM realized that the company ought to pay scientific attention to its service business, shifting from manufacturing-dominant logic to service-dominant logic (Maglio and Spohrer 2008). In the computer business, you can think of maintenance and technical support services, but also of services like security services, business process services and consulting services. This awareness gave birth to the domain of service science. Service science is introduced as a basis for systematic service innovation (Maglio and Spohrer 2008). Service science is formally defined as the multidisciplinary study of service systems, which are dynamic value co-creation configurations of resources (people, technology, organizations, and shared information) (Spohrer and Maglio 2008).



As with many definitions, this definition immediately introduces a number of unknown concepts that I will take you through.

1.1 Six blind men and the elephant

The first crucial element of the service science definition is the emphasis on a *multidisciplinary* study. Although service-dominant logic is a growing paradigm, scholars from different functional perspectives have investigated the corresponding challenges independent of one another (Bardhan et al. 2010b). The academic literature about services is traditionally rather mono-disciplinary. Those of us active in services marketing, were hardly aware of service studies in information technology, services management, service design, operations management, engineering, and service information systems. And the same goes for the other academic silo's doing great services research,

while neglecting other service research areas. We actually behaved like the six blind men exploring an elephant (figure 1). We only investigated a piece of a much larger phenomenon; missing crucial aspects of our study object (Bardhan et al. 2010a; Spohrer and Maglio 2008; Tallon 2010). A multidisciplinary approach embraces appropriate disciplines and functions. An interdisciplinary approach however, goes further and integrates a clearly defined set of new knowledge to bridge and integrate different research areas based on collaboration within and between disciplines (IfM and IBM 2008). In my view, interdisciplinary approaches are pivotal in understanding how services should be designed, delivered, and supported to facilitate the co-creation of value.

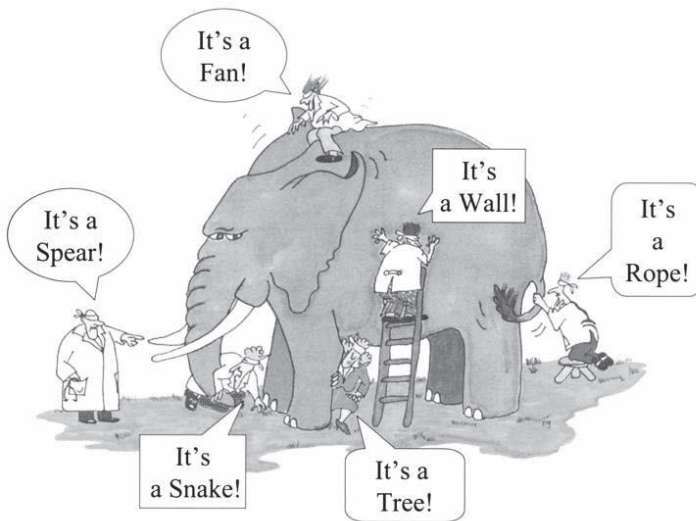


Figure 1: six blind men and the elephant

(The story of the blind men and an elephant originated in India from where it is widely diffused. It has been used to illustrate a range of truths and fallacies, Wikipedia).

1.2 All products offer a service

A second concept in the service science definition is *service*. Let's create a common agreement of what a *service* actually is. In early research, services have been seen as different from goods (Lovelock 1983; Zeithaml, Parasuraman, and Berry 1985). In this perspective, services differ from goods as services are intangible, heterogeneous, inseparable, and perishable.

Intangibility refers to the fact that a customer cannot touch or feel a service. If an innovative new car is created, a small-scale prototype can simply be crafted, even by using simple materials as paper or cardboard. If we create a new service concept, for instance at the Service Science Factory (SSF), it is much harder to demonstrate what we actually designed, as the service is built on interactions between people involved in a value creating process. If you purchase insurance, the only tangible evidence you get from your purchase is the document describing terms and conditions.

Heterogeneity means that most services are different each time a customer uses it as a service is largely depending on the service provider. Recall your last visit to your favorite restaurant. The service experience might be completely different this time, because of the incredibly unfriendly and formal waitress who is serving you tonight. Compared to last time's funny waiter this is a disappointing service experience.

Inseparability implies that production and consumption of a service take place at the same time. Not all, but many services are simultaneously produced and consumed. A beautician can only treat a customer if this customer is physically present. This feature of inseparability implies that services are typically co-created with the receiver of the service.

Finally, a service is *perishable* indicating that a service cannot be stocked. An empty seat in an airplane cannot be sold at a later stage. The value a provider loses because of a missed appointment cannot be resold. Therefore, some service providers like dentists, physiotherapists and pedicures charge their customers even in case of no show.

In 2004 Vargo and Lusch started a revolution by introducing the Service-Dominant Logic (SDL) which takes a more holistic perspective of the service offer, having important implications for service innovation (Paswan, Souza, and Zolfagharian 2009; Vargo and Lusch 2004; 2008a). In their logic, all economies are service economies and all businesses are service businesses, because a service is defined as 'the application of competences for the benefit of another party' (Vargo and Lusch 2008a, p. 4, FP 1¹). You might wonder: "why is this so revolutionary"?

¹ Vargo and Lusch (2004;2008) introduced 10 Foundational Premises (FPs) of their Service-Dominant Logic, I will only discuss the most essential FPs in this lecture

In a medical service encounter your doctor applies her care and cure related competences to co-create value with you (e.g. Odekerken-Schröder and Bloemer 2004). And in an educational setting, teachers apply their social and technical know-how to educate their pupils. These examples are rather close to the traditional view on services. But recall the last time you bought an alarm clock, or even an iPod. Traditionally, we would say that these are examples of goods and not of services. However, what we actually buy is a wake-up service or an entertainment service. Goods can be seen as the distribution mechanism of service provision (Vargo and Lusch 2008b). In the Service-Dominant Logic value is not created in the exchange, but in the use of the value proposition (FP7). If we do not instruct our alarm clock to wake us up at 7 in the morning, we won't be able to experience the wake up service. The offerings we bought are filled with knowledge and capabilities of various service providers and we, as customers, have to demonstrate the proficiency and willingness to liberate this stored knowledge (Michel, Brown, and Gallan 2008). In the Service-Dominant Logic this willingness to free stored knowledge is seen as co-creation, indicating that the customer is not only a co-creator of value in the case of educational, consulting, or hairdresser services, but also in creating value from the alarm clock or iPod (FP6). So ultimately, the customer or beneficiary of a service offering is the only one who determines the value of the offering (FP10) and therefore, a service centered view should by definition be customer-centric (FP8).

1.3 What do hospitals, universities and the global economy have in common?

The next step in understanding the service science definition is, to elaborate on the meaning of a *service system*. Maglio and Spohrer (2008) define a service system as a value co-creation configuration of people, technology, value propositions connecting internal and external service systems, and shared information (e.g. language, laws, and measures). They argue that the smallest service system consists of an individual interacting with others, while the global economy can be seen as the largest service system. Cities, nations, businesses, hospitals, and universities have in common that they are all examples of service systems. A service system is both a provider and a recipient of value propositions. So value creation takes place within, but also between service systems at various levels of integration (Vargo and Lusch 2008a). Therefore, service systems basically refer to the arrangements service providers and service recipients agree upon to work together to co-create value.

Let's make these philosophical ideas and theoretical constructs clear by considering Maastricht University as a service system. In this service system tutors and professors (*people*), supported by information and communication technology (*technology*), typically aim to enhance students' knowledge and skills (value proposition). Especially in our setting of Problem Based Learning (PBL) it is obvious that students have an active role in *co-creating* the experienced value.

This service system however, is way more complex than the mere interaction between student and professor. Maastricht University as a service system is simultaneously involved in co-creating relationships with various other service systems. Think of the crucial role of the government, corporate partners, suppliers, and the local community. In the end, everyone involved will experience value from the offered educational services. As a result, universities manage co-creation relationships among multiple co-clients and the university cannot simply be seen as a service provider, but as a complex adaptive service system of people and technologies working together to create value of learning (Spohrer and Maglio 2008).

1.4 Co-creation: more than a company's à la carte menu

Finally, *co-creation* is a pivotal concept in the Service Science definition. In 2004 Prahalad and Ramaswamy published a book on "co-creating unique value with customers". Inspired by their ideas, we know that in today's global economy, informed, networked, empowered, and active customers are only a mouse-click away. So why would a firm rely on product- and firm-centric value creation, in an era where customers are eager to co-create?

In the conventional conception of value creation, consumers were outside the firm (Prahalad and Ramaswamy 2004b). Firms were responsible for value production and consumers were responsible for value consumption. The market was typically seen as a target for the firm's offerings (figure 2). This conception of value creation is extremely company-centric. And in this situation the flow of information is unidirectional from the provider to the consumer.



Figure 2: company-centric value creation

Nowadays, consumers can access information about prices, offerings, and other consumers' assessment from around the world (Pralhad and Ramaswamy 2004a). Consumers are increasingly knowledgeable, networked, active, and empowered. They are no longer dependent on the unidirectional communication flow from the firm. Consumers select the providers they want to have a relationship with, based on their view of how value should be created for them: Customer Managed Relationships (CMR) instead of Customer Relationship Management (CRM) (Law, Lau, and Wong 2003). Online auctions for hotel rooms and airline reservations are compelling examples of this growing phenomenon. Consumers no longer pay according to the production cost of the provider, but according to their perceived value (Pralhad and Ramaswamy 2004a/b). Using their knowledge consumers are used to negotiating prices and other transaction terms, with a high risk of commoditization for the firm. If customers don't see the difference they will buy the cheapest version. Therefore, the firm should seriously reconsider the traditional firm-centric view and embrace the co-creation opportunities fostering interactions between consumer and company. But what is co-creation really about?

In a review by Bendapudi and Leone (2003) where co-creation was still seen from a goods dominant logic and therefore called co-production, five different levels of co-creation are identified. The weakest type of co-creation is emotional engagement, relying on a strong emotional appeal. Second is self-service, although this type of co-creation is still rather company-centric. Third, is experience staging, in which the customer is part of the context, such as a theme park. Fourth, is if the consumer

self-selects providers' prescribed processes. An example would be the choice menu at a call center. And finally, the provider and consumer actively engage in co-creating value. In these situations, customers are thinkers (cognition), feelers (emotion), as well as doers (behavior) (Payne, Storbacka, and Frow 2008).

To illustrate these different levels of co-creation, think of some of the work we got used to doing ourselves as consumers in the last 20 years. Consider self-service facilities at gas pumps, airplane boarding, internet banking, ATMs, and even supermarket checkouts. Other organizations found ways to stage a so-called true experience for consumers such as Disney or some of the top hotel chains. But in all these examples, the service provider is still in command of the overall orchestration of the consumer's experience. Therefore, the focus is still product-centric, service-centric and company-centric rather than customer-centric (Prahalad and Ramaswamy 2004a, p. 8).

These developments can also be observed on the web, where consumers can customize products or services, like shoes, holiday packages, flower arrangements or cars. But actually they simply choose from the provider's menu of features, while I support the idea that true co-creation is "more than a company's à la carte menu" (Prahalad and Ramaswamy 2004a, p. 10).

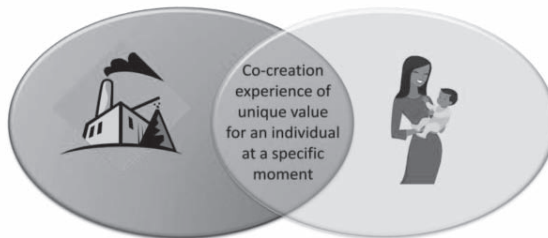


Figure 3: customer-centric value creation

Relatively little is known about how customers engage in true co-creation (Payne, Storbacka, and Frow 2008, p.83), but it is important to abandon the firm-centric view of value creation. Research indicated that some groups of consumers are more willing to co-create than others. Typically, innovators who are the earliest in adopting new products or services are willing to co-create. Lead users face needs before others in

the market place do so and therefore they are well positioned to co-create (Von Hippel 1986). Then so-called emergent consumers are able to apply their intuition to improve concepts that will be appealing to the larger market, are also very useful co-creators. And finally, market mavens are knowledgeable opinion leaders and as a result eager to co-create. Financial, social, technological, or psychosocial motivations underlie a consumer's willingness to co-create (Hoyer et al. 2010). Co-creation considers consumer-company interaction as the locus of value creation and the main task of the company is to facilitate and innovate robust experience environments.

The company representatives present this afternoon might wonder how this true value co-creating environment can be established. To provide you with some concrete suggestions, I will introduce the four DART building blocks of interaction that facilitate co-creation experiences (see figure 4).



Figure 4: DART building blocks of value co-creation (Prahalad and Ramaswamy 2004a)

Let's take the example of a hospital trying to treat obese patients. What would be of value to the obese patient? The treatment, the hospital, the medical equipment used, or the expertise of the doctor? Of course all these elements are crucial, but what makes the difference between a rewarding and a frustrating experience? It is the experience of co-creating value with the doctor, resulting in a treatment that takes into consideration the patient's medical condition, but also his lifestyle, or social obligations. As a result, value has to be regarded as subjective, experiential and influenced by social forces (Edvarsson, Tronvoll, and Gruber 2011).

The first building block of co-creating interactions refers to **Dialogue** between the doctor and the patient. Dialogue is more than listening to the patient and it assumes that the doctor and the patient become joint problem solvers who share communication and learning.

The second building block is **Access** to information. In the previous century doctors benefited from exploiting information asymmetry between them and the patients. But thanks to the connectivity and availability of information the patient will read information about obesity before even talking to a doctor. He will also consult other obese patients in online communities. This access to information is critical to having a meaningful, value co-creating dialogue.

Thirdly, **Risk** assessment will facilitate co-creating experiences. Should I change my lifestyle? What are the risks? Rather than only depending on the physician, the patient now makes an informed decision, taking responsibility for the co-created treatment and the corresponding consequences.

Finally, **Transparency** is a crucial building block to facilitate co-creation experiences. The patient will force the doctor to tell the truth. The doctor may not like this attitude, as it takes time and it is hard for the doctor to hide behind his authority. Neither the doctor nor the hospital should forget however, that transparency will ultimately result in a 'better' patient. The patient understands what the doctor tells, is involved in the treatment and will be more willing to comply with the medical treatment that the doctor and the patient jointly developed.

Summarizing, I follow Prahalad and Ramaswamy's view (2004a/b) that in the co-creating conception of value creation, the focus is on consumer-company interaction. The interaction can be anywhere, not only at the conventional point of sale or customer service. The roles of the provider and the consumer converge. The market is no longer seen as a place to exchange offerings for money, but as a space of potential co-creating experiences (see figure 3).

1.5 Customer-centricity

By now, you will have some kind of understanding of what service science entails. But then, there is customer-centric added to define my extraordinary chair. Why is that?

About ten years ago Sheth, Sisodia, and Sharma (2000, p.56) defined customer-centric marketing as “understanding and satisfying the needs of individual consumers and customers rather than those of mass markets or market segments”. Customer-centric marketing is different from one-to-one marketing as one-to-one marketing takes a product-centric approach and tries to adapt the product. In customer-centric marketing, the needs, wants and resources of the customer are the starting point of the planning process (Sheth, Sisodia, and Sharma 2000).

Most of you know that I spent considerable time of my academic career on investigating and teaching relationship marketing and CRM issues. Relationship marketing can be seen as a strategic approach of building and maintaining long-term relationships with customers for the dual creation of value (Payne and Frow 2005). So these relationships are meant to generate customer value while at the same time creating shareholder value for the firm (Boulding et al. 2005; Arnold, Fang, and Palmatier 2011). For successful relationship marketing strategies, a customer-centric approach is a prerequisite (Sheth, Sisodia, and Sharma 2000). Ordanini and Pararsuraman (2011), nicely summarize that a service-centered view is inherently customer oriented and relational.

Relationship marketing is not only a theoretical idea. Some of you work for or even own companies that strongly acknowledge the benefits of a relationship marketing strategy. Your company typically aims for a continuing dialogue with your customers, across touch points, with personalized treatment of your most valuable customers. These endeavors will also contribute to the co-creation willingness of your customers. Unfortunately, this is easier said than done, because of scalability challenges, i.e. the vast amount of customers with which the organization must interact (Wagner and Majchrzak 2007). Shah et al. (2006) argue that most companies lack the needed customer centricity to realize these beneficial long-term relationships, as they still emphasize sales. Customer-centricity means that by creating value for the customer, value for the firm evolves. They also indicate that organizational change in terms of culture, structure, processes and financial metrics are needed to achieve true customer-centricity.

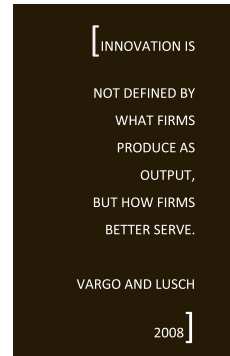
The good news is that we live in an era of rapidly developing new technologies. New technologies facilitate this true, scalable customer-

centricity. Wiki for example is a Web-based collaboration technology designed to allow anyone to update any information posted to a wiki-based Web site (Wagner and Majchrzak 2007). And we all know the example of Wikipedia and Wikileaks. This technology gives customers the opportunity to publicly edit an organization's Web presence. Wall Street Journal and BusinessWeek are two other examples of organizations that already benefit from this technology enabling customer-centricity.

Booz, Allen, and Hamilton (2004), introduce the customer-centric organization and argue that this organization does not only understand what the customer values, but also what value this customer represents to the bottom line. Trendwatching.com suggests that true customer centricity means that companies vote for whatever customers create, submit or develop. This is in sharp contrast to so-called personalization or customization where customers vote after companies have decided what will be offered. So what does this focus on customer-centricity imply for service innovation?

2. Customer-centric view of service innovation

Service innovation is crucial to maintaining competitive advantage (Paswan, D'Souza, and Zolfagharian 2009). Organizations that still focus on the distinction between products and services are shortchanging their own ability to innovate. Innovation is about co-solving customer problems. Viewing innovation from a service-logic perspective means that innovation by definition is a customer-centric term. In essence an innovation leads to a change in the value as it is used and defined by the customer. Therefore, innovation requires changes in customer thinking, participation, and capabilities to create and realize value (Michel, Brown, and Gallan 2008). Service innovation is about innovating the customer as a co-creator of value.



2.1 Typology of service-logic innovations

Many different typologies of innovation and service innovation are presented. Think of Booz, Allen, and Hamilton's (1982) distinction between new-to-the-world products versus improvements to existing products, or Wheelwright and Clark's (1992) fundamental versus incremental change. In the service innovation literature, Avlonitis et al. (2001) distinguish between new-to-the-market services at one extreme versus service repositioning at the other extreme. In a similar vein, Gadrey et al. (1999) suggest innovations in service products versus innovations in processes and organization for existing service. Overall, studies on the nature of service innovations, are only gradually developing and under-represented in the innovation literature (Möller, Rajala, and Westerlund 2008; Pacheco Pires, Sarkar, and Carvalho 2008; Toivonen and Tuominen 2009)

Anyhow, service innovation is considered crucial to maintaining a firm's competitive advantage in today's increasingly service-centered economy (Paswan, D'Souza, and Zolfagharian 2009). But what is a service innovation from a service-dominant logic? As service-logic innovation is customer-centric, it by definition changes at least one of the customer's roles as user, payer, or buyer. Moreover service-logic innovations change at least one of the firm's value creation features: smart offerings, value integration, or value constellation (see table 1).

Table 1: Framework for classifying service-logic innovations (Michel, Brown, Gallan 2008)

		Change of customer role		
		User	Payer	Buyer
Change in firm's value creation	Smart offering	1	2	3
	Value integration	4	5	6
	Value constellation	7	8	9

An example of an innovation in cell 1 is the glucose monitoring system that enables diabetes patients to self-diagnose their blood sugar levels, enabling the application of the most effective dose of insulin. As this task could previously only be done by a doctor, this can be considered a smart offering, changing the user's role. Another example of cell 1 is the global positioning system, a smart offering de-skilling my task of finding a destination.

A second example relates to value integration, referring to the specialization and division of labor. Let's consider Océ Business Services, leader in document services. Their digital mail offerings enabling faster access to incoming documents change the role of the user within the customer's company, but they also change the buyer role and the payer role, as fees will be different from traditional mail services. Therefore, this example relates to cells 4, 5, and 6.

Finally, a change in value-constellation means that the interplay among market participants and resources is changed to co-create value. As an example Youtube, enabling users to seek, share, and explore videos radically changed the value constellation, involving new user and payer roles. The service is free of charge and funded by advertising and subscription, referring to cells 7 and 8.

Firms thinking about service innovation should therefore not worry about what they produce as an output. They should rather ask their customers the question: Are you being served? (see also Vargo and Lusch 2008).

2.2 How to assess innovative service innovations?

From a business point of view, it might be interesting to know what service innovation entails, but even more important is the question how

to assess the innovativeness of service innovations? In a recent study on service innovations Ordanini and Parasuraman (2011) investigated internal as well as external participation in the service innovation process in the hotel industry. Internal participation refers to involving frontline employees in the service innovation process, while external participation refers to involving consumers as well as business partners. The effects of these co-creation efforts were assessed by *volume* and *radicalness*. Volume refers to the number of service innovations and radicalness refers to the extent to which the new service offerings differ drastically from current offerings and require major changes in the application of competences. These changes can refer to changing roles of users, payers, and/or buyers. Both volume and radicalness contribute to financial performance measures. Based on this study I developed table 2, summarizing the main findings.

		Change of customer role	
Volume		High	Low
	High	Frontline employees involved	Customers involded
	Low	Business partners involved	

Table 2: assessing innovative service innovations (Ordanini and Parasuraman 2011)

These findings demonstrate that collaborating with customers will generate more new ideas, but won't lead to radical innovations as customers might rely on what they already know. It is commonly known that frontline employees play a crucial role in service encounters as they can influence customer experiences (e.g. Brady and Cronin 2001; Di Mascio 2010). But frontline employees also seem to be a crucial source of innovation knowledge. Therefore, frontline employees should be stimulated to share their creative ideas, and to develop new ways of providing service. In a study by Melton and Hartline (2010) however, the contribution of customer involvement in new service development is stronger than employees' contribution. Nevertheless, both studies indicate that customers as well as frontline employees should not be

neglected in service innovations. Most firms operate in a larger service system consisting of a network of suppliers and other business partners. The open-innovation literature (e.g. Fang 2008) indicates that business partners' involvement in the focal firm's innovation process will enhance radicalness of the innovation resulting from the different perspectives involved.

2.3 Design thinking in service innovation

The previous part of my oration was a plea for engaging customers as active co-creators in the service innovation process. Engagement of the customer is a term including different behavioral manifestations towards the company or brand, going beyond purchase, based on motivational drivers (van Doorn et al. 2010). A promising approach to achieve this engagement can be found in the field of design thinking (Bessant and Maher 2009). Design thinking is 'a discipline that uses the designer's sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity' (Brown 2008, p. 2) (figure 5). Historically, design has played a tactical role as designers were mainly asked to make an already developed idea more attractive to consumers. Nowadays, design is seen as an increasingly competitive strategic asset, creating ideas that better meet consumers' needs and desires.

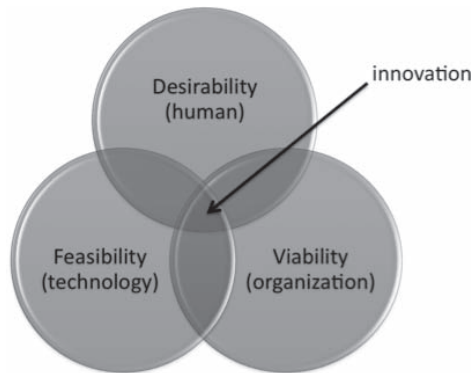


Figure 5: Design thinking in innovation (based on Brown 2008)

A design thinker typically takes a 'people first', or customer-centric approach, using empathy. This person typically sees all of the salient aspects of a problem, focusing on *integrative thinking*. Design thinkers are

optimistic by nature, assuming that there is always one potential solution to the problem at hand. In addition, design thinkers proceed in entirely new directions and don't rely on incremental tweaks, demonstrating *experimentalism*. And finally, a design thinker is not a lonely genius, but an enthusiastic interdisciplinary *collaborator*.

So how does design thinking lead to innovation? Design projects tend to move through the spaces of inspiration, ideation, and implementation. Projects typically loop back through these spaces and cannot be described by predefined series of orderly steps. Let's take an example from the financial service industry. Tim Brown, CEO of IDEO, a well known design and innovation consultant, launched the "Keep the Change" service for Bank of America as an outcome of their design approach to innovation. By spending time with all kinds of consumers they discovered a consumer behavior that you and I will recognize. After paying cash, we put the change into a jar at home. Once the jar is full, we treat ourselves, or put the money in a savings account. This is an easy way of saving. The customer-centric exploration led to the realization that this behavior could be integrated into a debit card account. The design team came up with a debit card and consumers could choose to have the total rounded up to the nearest dollar and the difference deposited in their savings account. The success of this innovation lay in its appeal to an instinctive desire we have to put money aside in a painless and invisible way. And the real pay-off is emotional, as Bank of America sends monthly statements showing customers how much they have saved without even trying (Brown 2008).

Especially suitable for a design thinking approach are so-called experience-centric services. "An experience occurs when a customer has any sensation or acquires knowledge from some level of interaction with the elements of a context created by a service provider" (Zomerdijk and Voss 2010, p.67). Obviously, experiences cannot be fully controlled by the provider and therefore it is important to engage the customer. Zomerdijk and Voss (2010) recently suggested six design principles for experience-centric services. Let's discuss these principles by envisioning the Disney World experience.

First, Disney World uses the *journey concept* for service design around the Guest Experience Cycle. This cycle describes a theme park visit as an emotional and physical journey, and not simply as a collection of

roller coaster rides. Second, Disney is fully aware of the importance of aesthetics, comfort and ease of moving around, addressing consumers' *five senses*. Third, interaction with frontline employees is the most important factor influencing customer experience. At Disney *frontline employees* are considered to be on stage with a specific role. Fourth, Disney cannot afford to offer amazing emotional experiences all the time, but positions *peak moments* during the service delivery process. The fifth design principle refers to the role of *other customers*. This is challenging as customers cannot be owned or employed by the customer. Disney's brand community is an interesting way to exploit other customers. Finally, Disney World developed 'role and purpose' emphasizing that even every *backstage* employee has a different role in the organization, sweeping the floor, serving burgers, or managing maintenance, but the holistic purpose is identical and formulated as making sure that every guest has the most fabulous vacation of her life.

In my view, integrating design thinking into the service innovation process will help companies to better engage their customers.

2.4 A practical technique for service innovation

What you hopefully took away from my oration so far, is that a service is basically an interaction with an actual customer, either through technology or interpersonal interactions (Bitner, Ostrom, and Morgan 2008). A service can be seen as a process, or a chain of activities. So understanding how customers evaluate the different steps culminating into the overall service experience is crucial.

Blueprinting is a technique that was initially used to identify failure points in a service operation (Shostack 1984/1987). Nowadays, service blueprinting is considered as a description of all activities for designing and managing services (Bitner, Ostrom, and Morgan 2008). It distinguishes between onstage and backstage operations, physical evidence is added and service blueprinting became more customer-focused, illuminating the customer's role in the service process. In its initial as well as in its developed format, service blueprinting is a relatively simple visual notation for depicting business processes via symbols that represent actors and activities.

A typical service blueprint consists of five different components:

1. Customer actions, these are central to the creation of the blueprint,

2. Onstage/visible contact employee actions, 3. Backstage/invisible contact employee actions, 4. Support processes, and 5. Physical evidence (see figure 6).

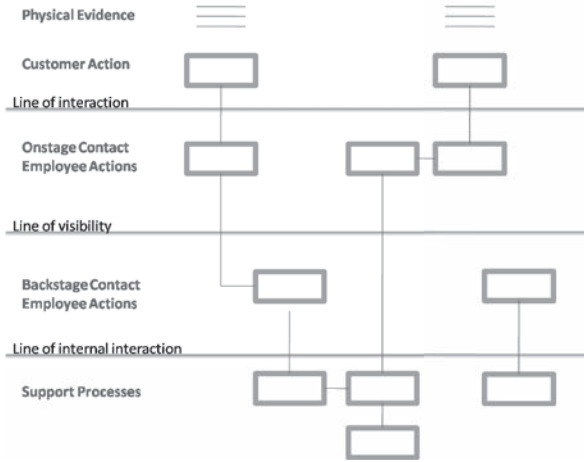
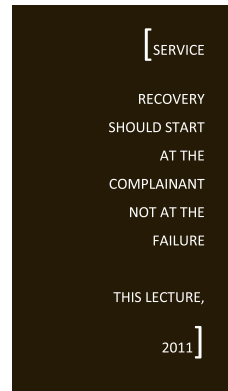


Figure 6: service blue print (based upon Bitner, Ostrom, and Morgan 2008)

Just try to think of your latest hotel reservation. And try to envision the entire service process according to the five components indicated. One of your actions as a customer could have been the online reservation you made for your stay at the hotel. As a visible employee's action you might recall the authentic greeting of the receptionist welcoming you. Backstage, someone made the reservation for you, or took the bags to your room. As support processes, you could think of the reservation system, while the physical evidence relates to the hotel's website, but also to its exterior, the lobby and the elevators. By recalling this experience, you immediately think of some crucial elements in the entire service process, either positive or negative. Service blueprinting enables the hotel's management to benefit from these insights, emphasizing certain critical encounters that would benefit from innovation.

3. Service failure and recovery

All these new ideas I discussed with you in terms of co-creation, innovation and identifying critical encounters in a service process, cannot avoid our daily stories about disappointment, frustration, and failure in service environments. What was your last complaint about? The delayed train? An incorrect bill of your mobile phone provider? An unreliable supplier, impacting your core business process? Or a lazy contractor responsible for building your dream house? For the Service Science Factory (SSF) the complaint management revolution initiated by the Dutch comedian Youp van 't Hek and our involvement in the analysis of his e-mails, was not only great exposure, but also emphasized the necessity for further research on issues of service failure and recovery. And this is no wonder. A service is co-created by human beings, and human beings make mistakes.



But, the results of service failures can be enormous. Grégoire and Fisher (2008) even argue that your best customers can become your worst enemies after service failures and poor recovery, and in a follow-up study Grégoire, Laufer, and Tripp (2010) demonstrate consumer revenge and negative word of mouth after service failures. In one of my recent studies, we also demonstrate that service failures are important drivers for customers to end their long-term relationship with a service provider (Odekerken-Schröder, Hennig-Thurau, and Knaevelsrud 2010).

But successful complaint handling can also lead to stronger satisfaction and loyalty than before the failure took place. This apparent paradox is called the 'service recovery paradox', and is only likely to happen in case of excellent service recovery (Smith and Bolton 1998). Therefore, the critical question is how to recover these mistakes in a customer-centric way?

3.1 Organizational complaint handling

What do you normally do after you encountered a service failure? You might choose between two main alternatives. You either complain and give the service provider a second chance, or you do not complain at all and just switch to an alternative provider (Colgate and Norris 2001)

and spread negative word of mouth (Keaveney 1995; Richins 1983). For those of you who complain, a complaint management approach should be in place. Homburg and Fürst (2005) made a distinction between a mechanistic approach and an organic approach to complaint handling. In the mechanistic approach organizations try to influence individual behavior by developing guidelines, while the organic approach focuses on training and motivating employees and providing them with shared values and norms. In the service settings, many complaints relate to perceptions of fairness of the behavior that the –call center- employee exhibits towards the complaint, which is called interactional justice (Gelbrich and Roschk 2011). Interactional justice refers to employees' empathy, politeness, and effort to solve the problem (Smith, Bolton, and Wagner 1999; Tax, Brown, Chandrashekar 1998). Setting guidelines like in a mechanistic approach won't solve these issues of unfairness, relying on an organic approach, therefore seems to be more appropriate.

A recent study takes an internal perspective on service recovery and distinguishes between technical system components and social system components (Smith, Fox, and Ramirez 2010). Let's first address the technical components. Accessibility, opening up for customer feedback is important. The training intensity of frontline employees is defined as a valuable instrument. Related is the concept of empowerment which means giving employees the authority to solve customer problems. Another technical component relates to standardized procedures. Finally, the customer's role in the recovery process is acknowledged. Concerning the social components, Smith, Fox, and Ramirez (2010) introduce efficacy, which is defined as the employee's intrinsic ability to recover failures. A second social component is avoidance. This is illustrated by several 'Youp' e-mails we were allowed to read. Some service employees simply ignored complaints or complainants. And of course this type of behavior should be minimized. Another recent study (Smith and Karwan 2010), indicated that the recovery system of an organization develops with the organization. So, a more mature organization, is more likely to have a carefully developed recovery approach, whereas a young organization is lacking clear recovery standards. Nevertheless, all of us are aware of mature organizations that do not have a decent complaint management approach in place. All these and other studies on service failure complaint handling contribute to our understanding of service recovery, but they mainly start at the severity of the complaint, or the cause of the complaint (e.g. Keaveney 1995), without asking what the customer actually expects from the service recovery.

3.2 Start at the complainant

In the past months, following our analyses for Youp van 't Hek, I have been advocating a more customer-centric approach towards service recovery. Of course, we need capable call center employees, and of course they need to be trained. But what does the customer really expect from the service recovery?

In one of my service recovery studies, we focused on these customer expectations of service recovery (Ringberg, Odekerken-Schröder, and Christensen 2007). Although different customers might be confronted with exactly the same service failure, they might expect a different approach in service recovery.

Imagine an airplane which is delayed because of severe weather conditions. Customers call the airline's helpdesk for more information. They have to wait in line and then all of a sudden the line is broken. Our study demonstrates that customers facing a service failure can be categorized into three distinct groups, displaying different expectations towards service recovery (figure 7).



Figure 7: customer typology in service recovery (based upon Ringberg, Odekerken-Schröder, and Christensen 2007)

Let me first introduce you to Kim, the *relational customer*. She is mainly disappointed and for her the service failure feels like her best friend let her down. She is rather vulnerable and even takes responsibility. She even asks herself: "Who wants to fly to the Canarian Islands in January anyway?" She is willing to forgive and is very tolerant towards the service

provider. She is willing to co-create in finding a solution. How to address Kim? Like in a personal friendship, Kim is receptive to a sincere apology and an explanation of what went wrong.

Erik, the *oppositional customer*, is a different story. Erik is ready for a fight. He is very angry and even aggressive towards the call center employee. If an airline plans a flight in January, they should realize this flight. How? This is not his business. And then even charging him, for the inefficiencies of their organization, while waiting for a call center employee, it is a shame. This is ridiculous. He is not at all willing to forgive and he is very cynical towards the service provider. How Erik best can be addressed? By giving him a feeling of control. Offer him several recovery options he can choose from, but simply reject excessive demands.

And finally Joyce, the *utilitarian customer* is not even emotional and simply expects compensation for the inconvenience. She is not looking for loyalty, revenge or friendship, but she is somewhat irritated because of the inconvenience. Her complaint effort is nothing more than a negotiation and at the end of the process, she simply moves on. As a service provider you can easily recognize Joyce as she is pragmatic and expects the organization to take responsibility. The final compensation is mainly financial, making up for the perceived inconveniences.

This typology implies that companies have to be flexible in addressing service failures. Acknowledging differences in customer expectations is not necessarily more expensive, and can even reduce costs, as not all customers expect a high financial compensation. Based on this study, I would recommend companies to train call center employees in recognizing different customer types, empowering them to offer recovery options accordingly, while agreeing on a maximum budget per type of complaint.

Summarizing, I would plea for a complaint management approach starting at the complainant rather than starting at the failure.

4. Implications

Establishing a chair in Customer-Centric Service Science is a sign that Maastricht University's School of Business and Economics is still as innovative as its start in 1982. As far as I know, chairs dedicated to Service Science are scarce or even nonexistent. Therefore, I consider this privilege as a great opportunity to contribute to the development of Service Science at Maastricht University a university leading in learning and emphasizing multidisciplinary research. As a university we have a very important role to play in the global service economy, as partners in innovation, technology transfer and education for the future (see also Bitner and Brown 2008). My view on Service Science as I shared with you, also has challenging implications for education, research and valorization of scientific knowledge that I would like to take your briefly through.

4.1 Implications for education

The Problem-Based Learning (PBL) approach, that Maastricht University is respected for, has the potential to facilitate co-creation in its purest meaning. As an example, I refer to my Master of Science course on Relationship Marketing. In this course, I cooperate with one of the biggest fast moving consumer goods manufacturers Procter and Gamble. The company presents a real-life problem, and in a small team of students with different backgrounds students try to develop a solution to this problem. In the end the company, the university as well as the students co-create value.

Recently, the Lisbon strategy with an emphasis on innovation and knowledge-based economies was evaluated, and the European Commission had to conclude that the objectives were not entirely met, offering opportunities for increased progress. How can Maastricht University make such a contribution?

First, Maastricht University wants to educate the leaders of tomorrow in a service-dominated global economy. To achieve this objective, I envision curricula that emphasize T-shaped graduates (Berger 2009; Spohrer and Maglio 2008). T-shaped graduates are deep problem solvers in their home discipline, who also demonstrate a broad understanding of general business processes and who are able to interact with specialists from a wide range of disciplines and functional areas (Brown 2008). People who are currently employed as a specialist can be trained in more

generalist business skills and generalists can be taught in specialized skills. These are re-education initiatives in which Maastricht University could play a role by developing post graduate programs that fit these specific requirements.

On the other hand, I am strongly in favor of adjusting our Bachelor, Master, PhD, and executive curricula to the changing needs of our global service economy and of the business world in particular. Success in the 21st century will be largely dependent upon collaborative, co-creating education, for which PBL is particularly appropriate. We should exploit our unique teaching setting to offer our students an environment in which they apply scientific principles from different research domains to the development of high quality services.

My department of Marketing and Supply Chain Management is renowned for its expertise in services marketing research. Scientific endeavors by Ko de Ruyter, Jos Lemmink, Hans Kasper, Martin Wetzels and many others in hosting service conferences, publishing in leading international journals, acting as reviewers of top marketing and service journals, while integrating service marketing perspectives into our Bachelor and Master curriculum are widely respected. In my view, we are well prepared to take the next step in developing new knowledge and truly interdisciplinary service curricula. Close collaboration with information management, infonomics, operations management, entrepreneurship, management of learning and finance are indispensable in my perspective. But I envision an even more radical curriculum change by incorporating disciplines outside our School of Business and Economics and even outside Maastricht University.

I realize that these curriculum changes cannot be implemented overnight. Nevertheless, as a first step it is feasible to add service science qualifications to existing home disciplines of the School of Business and Economics and other faculties and schools of Maastricht University. This enables our students to have a thorough understanding in the fundamentals of service innovation research. With their evolving service mindset and their PBL background, they will be able to work effectively in project teams across discipline and functional silos.

In addition to the course work, I consider real-life service science projects an indispensable part of service science education. The Service Science

Factory (SSF) enables interdisciplinary project teams to work on real-life service innovations. These projects offer a great opportunity for students and researchers to apply their scientific knowledge to a practical setting and to get research inspiration from interactions with the business world at large. On the other hand, these projects offer company workers the opportunity to learn service science thinking on-the-job, by actively participating in project teams.

The service science projects are truly interdisciplinary, going beyond departments, beyond faculties and schools at Maastricht University, by actively cooperating with institutions for higher education offering different research disciplines. Nice examples of partners the SSF is currently working with, are the Köln International Design School, RWTH Aachen, and Hogeschool Zuyd.

We currently stimulate students to substitute or complement traditional elements of their curriculum by a service science project. This enables them to actively build their T-shaped profile and to experience service innovation before graduating.

4.2 Implications for research

Scientific research on service science is still in its infancy (Maglio and Spohrer 2008). And I am happy about this state, implying that we can still make a significant contribution. We do witness however, an increasing number of special conference tracks on service science, articles touching upon service-dominant logic as the underlying foundation of service science, and several books bundling scientific articles in the field. One of my ambitions is to contribute to bridging opportunities between different disciplines, simplifying the used vocabulary, all addressing the latest challenges in service.

Looking back at my own research career, I started in 1994 with my Master thesis on relationship quality in cooperation with Gulpener beer brewery. In 1999, I defended my doctoral dissertation on consumer relationship proneness. In the foundational studies, I conducted and published with Kristof de Wulf, we emphasized that not every consumer is willing to engage in long-term relationships, emphasizing some kind of customer-centricity already (e.g. Odekerken-Schröder, De Wulf, and Schumacher 2003; Odekerken-Schröder and Bloemer 2007). The researches that followed were linked to service relationships or service recovery in

one way or the other (e.g. Odekerken-Schröder et al. 2000; Odekerken-Schröder, Hennig-Thurau, and Knaevelsrud 2010). All of them conducted from a relationship marketing and services marketing perspective.

Based on this expertise and these experiences, it is time to move beyond the service marketing perspective and embrace service science. Building and inspiring a group of young, interdisciplinary, and innovative researchers willing to walk the talk with me, is my major research ambition for the next five years. Maastricht University has the potential to become a thought leader in the service science domain, hosting conferences, facilitating scientific collaborative research projects, and offering an overall inspiring research environment.

Content wise I will start with two prevailing research themes. First, I want to establish deep knowledge about customer participation in co-creating valuable service experiences. As elaborated upon, earlier in this lecture, co-creation and innovation are two critical elements in the domain of service science. Exemplary research questions could be: What is the impact of different motivational drivers on the co-creation outcome? I am curious to learn more about the impact of those who are mainly financially motivated to take part versus those who are simply curious. Would the resulting outcomes be different? Another potential research question is: Are consumers who collaborated in an innovative solution more likely to adopt the resulting service than consumers who did not take part? Previous studies indicated that adoption of service innovation is dependent on image congruence (Kleijnen, De Ruyter, Andreassen 2005). I suggest that co-creation might be another factor and hypothesize that those who did take part in the service innovation process, feel it is part of their own achievement and would therefore be more willing to adopt. Finally, how can a service innovation actually be designed? I am fascinated by the world of the design thinkers and I am willing to investigate to what extent service innovation can benefit from design thinking.

A second research theme that I am fascinated about is the enhancement of valuable service experiences. As discussed, service science is largely a matter of consumers' subjective service experiences. A first research question is: How to benefit from design thinking in creating service experiences? A comparison of services with high experiential content to those with low experiential content could offer interesting insights. I look

forward to exploring the potential of design thinking in scientific studies. In addition, online service experiences of wikis and social networks are by nature a combination of technology, marketing, operations, and finance. Therefore, another research question could be: How to benefit from co-creation in developing rewarding online service experiences (e.g. Odekerken-Schröder and Wetzels 2003)? A customer journey, or service-blueprint, will look different in online experiences.

While shaping my research ambitions, I will especially pay attention to interdisciplinary opportunities for collaboration.

4.3 Implications for valorization

SBE started in 1981 as the Faculty of Economics and in 1995 changed its name into the Faculty of Economics and Business Administration (FdEWB), still distinguishing itself from its competitors by applying PBL as the educational approach. This concept is still underlying all its activities, but it is gradually being appreciated and copied by other institutions for higher education. In the mid-nineties, FdEWB stressed its international ambitions by building an international network and by offering a study program on International Management, later resulting in International Business. In 2009 FdEWB was renamed into School of Business and Economics. In its current environment, more and more international initiatives are undertaken by other universities. Therefore, in the history of SBE, the Service Science Factory can be seen as the next step in innovative education and in developing a competitive advantage. The Service Science Factory is a vehicle that merges research, education, and valorization. This is done by bridging academia and business in efforts to co-create innovative services. Although SSF embraces the service-dominant logic, the main emphasis in SSF projects is on services in the traditional definition. The Service Science Factory team strongly acknowledges the visionary support by Maastricht University's board, the board of the School of Business and Economics, and of the Faculty of Health, Medicine and Life Sciences. We also truly appreciate the commitment of the Faculty of Law and the Faculty of Art and Social Sciences. These commitments provide evidence for the truly interdisciplinary approach of the Service Science Factory.

The Service Science Factory (SSF) is active in 1. innovative projects, 2. autonomous research, and 3. service science education.

SSF shares Michel, Brown and Gallan's (2008, p.52) view that "no single firm is capable of employing all the smart people that can help them to fulfill their organization goals". Therefore, SSF can be seen as a way to temporarily extend an organization with innovative skills and interdisciplinary expertise. In May 2010 we started with the first innovative projects and we highly appreciate the confidence we received from Océ and APG, the first companies willing to outsource and co-create service innovations at the SSF. What does a Service Science Factory innovative project look like? Based on the PBL principle, of small groups and interactive learning, but also on the international character of the school, SSF works in small international and interdisciplinary teams on real-life service innovation projects. Company workers can consider their participation in an SSF project as part of their personal development plan. The SSF project will not only result in the project outcome, but also in a crucial learning experience for the company worker. This experience consists of familiarization with state-of-the-art knowledge, insights in service science and most importantly knowledge about the implementation of service innovation projects in their respective companies.

The projects are mainly driven by a company need, challenge or opportunity. Depending on the required expertise, we build a team of international and interdisciplinary experts consisting of students, researchers, and company workers to collaborate intensively during a period of minimal 8 weeks. By using design thinking and benefiting from the different backgrounds, these teams can be compared to a pressure cooker, resulting in a prototype of the new service concept (with embedded knowledge of the participating parties). In the past 10 months we completed 12 of these innovative projects and on Monday, March 28, we start with the next batch of 5 projects. The projects relate to the wide range of service innovations that you can possibly think of. These projects can be considered as a valorization mechanism. SSF has access to a large network of interdisciplinary knowledge that can be used to solve these concrete challenges our society is facing.

Second, SSF has the ambition to work with dedicated researchers and PhD students on autonomous research projects in the service science field. At the moment a team of scientific researchers is studying the broad theme of service failure and recovery. By conducting these autonomous research projects, SSF will gradually build an extensive knowledge base

and the resulting insights will be marketed to internal and external service providers.

Third, SSF is playing a role in offering service science education at different degree and non degree levels. Participating in a service science project is one way to learn about service science by doing. Bachelor, Master and PhD students, but also company workers participated and will continue participating in projects to familiarize themselves with service science, innovation, and co-creation. In addition, SSF is exploring additional ways to integrate service science ingredients into the bachelor, master and PhD curricula of different faculties and schools. The division of Post Graduation Education, directed by Mariëlle Heijltjes will be an important partner in developing post graduate trainings in service science, preferably in close-collaboration with companies and other external stakeholders.

Holding a chair in Customer-Centric Service Science is a privilege to witness and direct the development of a promising initiative like the Service Science Factory. Co-creating with others, I will do my utmost to make this undertaking a valuable and lasting service experience for all parties involved.

Thank you!

It was wonderful to share my plans and ambitions for the future with all of you today. But at the intersection of my fortieth birthday it is also time to look at the past, count my blessings and acknowledge those of you who made a substantial contribution to my personal development and achievements so far.

First of all, I would like to express my gratitude to those of you who stimulated me to consider an academic career at all. Robert Pans who hired me in 1989 as a student assistant and immediately assigned responsibilities to my student job. Jos Schijns who supervised my Master's thesis and stimulated my interest in service relationships. After three years of tutoring I was determined to write my doctoral dissertation and felt the ambition to dig deeper into the consumer's role of long-term relationships. In this stage my ambition was facilitated by Hans Kasper and Janny Hoekstra who supervised my doctoral dissertation and agreed on my tight time schedule. Kristof De Wulf, my PhD research partner, was the one with whom I shared all the challenges and victories of our first steps on the academic ladder.

Since 1999 I had the opportunity to collaborate with inspiring co-authors all over the world. The complementarity of our knowledge and skills, as well as the inspiring interpersonal interactions are a privilege of academia that I will cherish and look forward to in my future undertakings. Almost twenty years after my suspicious first steps in the academic world, Jos Lemmink as SBE dean and Ko de Ruyter as department chair created the opportunity for my extraordinary chair. I also express my gratitude to SWUM and the Maastricht University board for facilitating this extraordinary chair in Customer-Centric Service Science, which is unique in its kind.

I always tell relatives and friends that I have two simple rules that determine my career path. First is that I have a strong desire to be challenged to learn new things. Second is that I wish my working day to be rewarding and pleasurable. I am grateful to those of you who contribute to the inspiring atmosphere of my professional life. Therefore, I want to say thank you to all my current and former colleagues, students and business partners of the department of Marketing and Supply Chain Management. I value the confidence Claudia van Oppen, Anne Knaevelsrud, Iraz Kilic, and Katja Sillen gave me in supervising their

doctoral dissertations which turned out to be value co-creating service experiences. Thank you, Lisa Brügggen and Piet Pauwels for sharing more than work-related issues.

As Director MSc programs I got the opportunity to get to know many colleagues outside my own department personally and I cherish our joint journeys, challenges and successes of the past three years. Thank you Rudolf Müller, Roger Meuwissen, Peggy Rompen and all colleagues of the Faculty Bureau for all the inspiring co-creating experiences that we shared.

Since last year I was caught by the Service Science Factory initiated by Jos Lemmink and Ingrid Wijk. In the past hour, I shared our achievements and plans, but I did not share my deep respect for the unique atmosphere in our factory. Anja Jansen, Linda Lichel, and Karol Karpinski, you are a unique blend of complementary personalities who make my stay at SSF productive, pleasurable, heartwarming, and above all one of its kind. Rob de Bie, Wynand Bodewes, Paul Iske, Jos Lemmink, and Tjark Vredevelde: it is a great privilege to chair a Management Team that is dedicated, hard working, flexible, innovative, averse to personal egos, and most of all a very pleasant and inspiring group to be part of. Nevertheless, neither a great idea, nor a unique team is sufficient. The existence of Service Science Factory is largely dependent upon the trust we got from our clients and other external stakeholders. I highly appreciate your commitment to our factory and I look forward to a continuing, inspiring co-creation journey.

Although work-life balance implies that there is no life at work, which I disagree with, a gratifying work-life balance is my secret key to success. I love playing more than one role, but prefer to clearly distinguish between these various roles. At work I feel happy in my role as professor, director, supervisor, tutor, and colleague, but at home I am blessed to have rich and rewarding family and friendship roles.

A special thank you to all my relatives and friends for respecting my choices, supporting my endeavors, and for teaching me important lessons in life. Roel and Mariël: I am still deeply touched by your continuing true friendship consisting of mutual respect, unconditional support, and countless moments of laughter. Nathalie and Joe: you are the best neighbors ever, and Nathalie and Marc: observing the friendship of our daughters says it all.

Getting closer to the end of my talk, I cherish the importance our granddad used to attach to family relationships. 'Oma' is still my role model in her unrelenting and authentic interest in her children, grand children, and great grandchildren, but also in the world at large. 'Lieve Oma', it is an immense privilege to have you here today, you made it! Then, twenty years ago I was warmly welcomed in my second family, my family-in-law, thank you for taking me as I am. But the foundation for my life was created 40 years ago. 'Lieve mama en papa', thank you for respecting my choices, stimulating me to make my own decisions and for always having confidence in me. The solid basis both of you created was needed to build my happy life and successful career on. Last but not least, thank you Anja, for finally being my sister and for allowing me to be your beloved Giel's aunty.

En dan tot slot, de pijlers onder mijn bestaan, Armand en Sterre. Eindelijk geen Engels meer, hè Sterre. Dankjewel dat je zo keurig hebt geluisterd naar mijn lange, saaie verhaal. De voorkant van mijn boekje is gelukkig niet saai door jouw mooie ontwerp. Daar ben ik heel blij mee! Sterre jij hebt me de afgelopen 9 jaar meer geleerd dan wie dan ook. Het is dan ook een voorrecht om jouw mama te mogen te zijn en ik ben ongelooflijk trots op wie jij bent. Armand, dat ik hier sta, heb ik voor een heel groot deel aan jou te danken. De afgelopen 20 jaar hebben we heel veel keuzes gezamenlijk gemaakt en deze keuzes hebben ertoe geleid dat we nu staan waar we staan. Bedankt dat je nog elke dag een heel warm thuis voor me bent. Samen met jullie tweetjes kan ik de hele wereld aan!

Ik heb gezegd.

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